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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,158	10/06/2003	Yu Wang	839-1441	5742
30024	7590	08/24/2005	EXAMINER	
NIXON & VANDERHYE P.C. 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER

2834

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/678,158	Applicant(s) WANG ET AL.	
	Examiner Nguyen N. Hanh	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-23 is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-19 and 24 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-12, 14-19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaminski et al. in view of Calfee.

Regarding claim 1, Kaminski et al. disclose an enclosure for a rotor in a generator including the rotor (10 in Figs. 1-4), rotor windings (18) and a stator, the enclosure (38) comprising a plurality of composite rings located adjacent one another along a length dimension of the rotor so as to contain the rotor windings on the rotor (Col. 2, lines 65-67). Kaminski et al. fail to show said rings each comprising at least two layers selected from the group consisting essentially of metals, glass fiber laminates and graphite fiber laminates.

However, Calfee discloses a lamina composite of high impact comprising at least two layers selected from the group consisting essentially of metals, glass fiber laminates and graphite fiber laminates for the purpose of improving interlaminar shearing resistance (Abstract).

Since Kaminski et al. and Calfee are in the same field of endeavor, the purpose disclosed by Calfee would have been recognized in the pertinent art of Kaminski et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Kaminski et al. by making the ring with a lamina composite of high impact comprising at least two layers selected from the group consisting essentially of metals, glass fiber laminates and graphite fiber laminates as taught by Calfee for the purpose of improving interlaminar shearing resistance.

Regarding claim 2, Kaminski et al. disclose an enclosure for a rotor wherein the rings are spaced at predetermined intervals (Fig. 3).

Regarding claim 3, Kaminski et al. disclose an enclosure for a rotor wherein the rings are spaced axially (Fig. 3).

Regarding claim 4, Kaminski et al. disclose an enclosure for a rotor wherein said plurality of rings include a plurality of axially shorter rings located between a pair of axially longer rings.

Regarding claim 5, Calfee also discloses a lamina composite wherein a radially innermost layer (11 of Fig. 1) of said at least two layers comprises a metal layer.

Regarding claim 12, Calfee also discloses a lamina composite wherein said at least two layers comprises at least three layers (five layers as shown in Fig. 1), and wherein a radially intermediate layer comprises a layer of graphite fiber laminates (13).

Regarding claim 14, Calfee also discloses a lamina composite wherein said at least two layers comprises at least three layers (five layers as shown in Fig. 1), and wherein a radially intermediate layer comprises a glass fiber laminate layer (12).

Regarding claim 15, Calfee also discloses a lamina composite wherein a radially innermost layer and a radially outermost layer of said at least three layers comprise metal layers (11 in Fig. 1).

Regarding claim 17, Calfee also discloses a lamina composite wherein said at least two layers comprises five layers (Fig. 1) and further wherein radially innermost and outermost layers are metal (11), layers adjacent said radially innermost and outermost layers are glass fiber laminates (12); and a core intermediate layer comprises graphite fiber laminates (13).

Regarding claim 18, Calfee also discloses a lamina composite wherein a radially outermost layer of said at least two layers comprises a metal layer.

Regarding claims 6-11, 16, 19 and 24, Kaminski et al. and Calfee disclose the claimed invention except for showing the locations of the glass fiber laminate layer, the graphite fiber laminate layer and the metal layer as described in claims 6-11, 16 and 19 and 24. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the glass fiber laminate layer, the graphite fiber laminate layer and the metal layer at the locations as described in claims 6-11, 16, 19 and 24, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Allowable Subject Matter

2. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

3. Claims 20-23 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 13, the prior art of record does not show an enclosure for the rotor as described in claim 1 wherein a radially outer layer comprises graphite fiber laminates and a radially inner layer comprises metal, and wherein said axially shorter rings vary in diameter in opposite directions toward a center ring of smallest diameter.

Regarding claim 20, the prior art of record does not show an enclosure for the rotor as described in claim 20 wherein said plurality of rings include a plurality of axially shorter rings located between a pair of axially longer rings, and further wherein said axially shorter rings vary in diameter in opposite directions toward a center ring of smallest diameter, and have different compositions than said axially longer rings.

Regarding claim 23, the prior art of record does not show an enclosure for the rotor as described in claim 23 wherein said plurality of rings include a plurality of axially shorter rings located between a pair of axially longer rings, said axially shorter rings decreasing in diameter in opposite directions towards a center ring of smallest diameter.

Response to Arguments

5. Applicant's arguments filed on 6/9/2005 have been fully considered but they are not persuasive. The applicant's argument is on the ground that "it is not obvious to combine two references because the secondary reference to Calfee does not anyway relate to the construction of an enclosure for a rotor in a generator and Calfee relates only to flat plate construction and never even alludes to a body of revolution component

like a ring". The Examiner respectfully disagrees with the Applicant. Calfee's invention directed to a lamina composite of high impact and the disclosure of Calfee never show that lamina composite only work on a flat plate. Indeed, as shown in Fig. 4 (b) and 4 (c), the lamina composite can work in hoop direction. For the reason explained above, the rejection is still deemed proper.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information on How to Contact USPTO

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

August 19, 2005


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000